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ABSTRACT

A study was conducted to expand the body of research that tests the validity of Abraham Maslow's hierarchy of needs theory in a work context where it often serves as a guide for the supervisor's relationships with his subordinates. Data was gathered by questionnaire which tested for a hierarchy of needs among instructors at four community colleges in North Carolina. The semantic differential technique was used to measure needs satisfaction, and needs importance was measured by a ranking procedure. Correlations of needs importance and needs satisfaction revealed no evidence of a hierarchy of needs as described by Maslow. The finding suggested that a job offering reasonable opportunities to satisfy the basic needs will break down the heirarchical relationship posed by Maslow. Thus, supervisors who use the hierarchy of needs theory to guide relations with subordinates should re-examine their approach and consider other theories that explain the interrelationship of needs and predict subordinate behavior. For example, there is the theory of a two-level hierarchy of needs that places the essential biological needs on the bottom of the hierarchy and all the other needs (security, social, other-esteem, self-esteem, autonomy, and self-actualization) on the next level. Such a theory holds that all of the upper-level needs are of equal importance, with the dominant need varying from moment to moment and from day to day. (TA)

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A VALIDATION STUDY OF MASLOW'S HIERARCHY OF NEEDS THEORY

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ABSTRACT

The hierarchy of needs theory advanced by Abraham Maslow is used extensively in work situations where it often serves as a guide for the supervisor's relationships with his subordinates. Despite such widespread application, there has been insufficient research regarding the validity of the theory in work situations. This study addressed the problem by testing for a hierarchy of needs among instructors at four community colleges in North Carolina. Data were gathered by use of questionnaires. The semantic differential technique was used to measure needs satisfaction, and needs importance was measured by a ranking procedure. Correlation of needs importance and needs satisfaction revealed no evidence of a hierarchy of needs as described by Maslow. The idea of an alternative two-level hierarchy was discussed.

The hierarchy of needs theory advanced by Abraham Maslow (1943, 1954) has important implications for supervising subordinates and serves as a focal point in most graduate management classes. Maslow identified five categories of basic needs (psysiological, safety, social, esteem, and self-actualization needs). Forming the very heart of Maslow's theory was his contention that those needs are arranged in a hierarchy. Proceeding from the lowest to the highest order needs, the hierarchy consists of the following categories:

1. Physiological needs, consisting of such biological needs as food, water, air, etc.
2. Safety needs, or the need for freedom from danger.
3. Belongingness and Love needs, often called social needs.
4. Esteem needs, including the need for esteem from others, for self-esteem and for autonomy.
5. Self-Actualization needs, or the need for the fulfillment of one's potential.

Inherent within the theory of a hierarchy of needs are the following two propositions. First, the lower a particular need is in the hierarchy the greater will be its prepotency. Thus, the individual will focus his efforts toward satisfying needs lower in the hierarchy, causing those needs to be satisfied more than higher level needs. A

second important proposition stemming from the theory of a needs hierarchy is that a need will not become important to a person until the needs lower in the hierarchy are at least partially satisfied. Once those needs are satisfied, Maslow argued, their importance decreases. Thus, Maslow proposed a decrease in the importance of a need following its satisfaction. In short, "A satisfied need is not a motivator" (Maslow, 1954, p. 105).

The initial application of Maslow's theory of a needs hierarchy was in the conceptualization and treatment of psychological disorders. However, the writings of a host of organizational theorists have caused the needs hierarchy theory to be applied to the work situation where it often serves as a guide for the supervisor's relationship with his subordinates. The hierarchy of needs theory proclaims the existence of a dominating need that provides the chief motivating force for employees. If that is true, administrators can relate to their subordinates by identifying the one dominant need of each individual and concentrating motivational efforts around that one need. In addition, the existence of a dominant need would offer a convenient rationale for the explanation and prediction of subordinate behavior.

However, there is considerable uneasiness in some quarters regarding the validity of applying Maslow's theory to work situations. For example, Bennis (1966, p. 196) wrote that:

> Most contemporary organizational theory, when it does deal with personality, bases its view of man on Maslow's 'hierarchy of needs' theory. I am baffled to discover that little has been done to test the validity of this theory...It would not only be useful, but crucial, to devise more empirical validation of these ideas.

The empirical research that has occurred has been divided into two categories: research that supports the theory and research that fails to support it. In regard to research that supports the theory, most of it involves only the lowest level needs. Coffer and Appley (1964) Dachler and Hulin (1969), and Aderfer (1969, 1972) all provided evidence that as the lower level needs become more satisfied they become less important. Findings such as these suggested to Lawler and Suttle (1972, p. 267) some "support for the hierarchical concept but only for the lower-level needs."

However, Porter's (1961, 1962, 1963) research on the needs satisfaction of managers lent support to the theory of a hierarchy of needs encompassing the higher level needs. In general, Porter found that managers at all levels tended to perceive the least satisfaction in the highest-order needs (autonomy and self-actualization) and also to attach greater importance to those needs. Maslow's theory, of

course, predicts and explains Porter's findings. Still, Hall and Nougaim (1968), were skeptical that Porter's findings actually supported Maslow's theory. They speculated that the results might best be explained by status expectations rather then by lower-order needs gratification. They wrote (p. 14) that:

> It may be true, as the hierarchy theory would predict, that top executives have high needs...because their lower-order needs have become relatively satisfied. On the other hand, though, these qualities may have been present before the executives were promoted (as intrinsic personality factors)....Thus, these higher-level concerns may have been a cause, not an effect, of the high organizational status.

In regard to research that fails to support Maslow's theory, Goodman (1968) used the categories of security, social, and esteem needs to examine dominant motivations at play in job preference. Since the individuals tested demonstrated few dominant motivations, Goodman (p. 55) concluded that "this would imply that the Maslow hierarchy perhaps should not be considered a hierarchy in this situation." The evidence suggested to Goodman (p. 57) that:

> ...a job which offers no real hazards, reasonable security, and good level of interaction opportunity will serve to break down the hierarchical relationships posed by Maslow.

In a longitudinal study of the careers of a group of managers over a five-year period, Hall and Nougaim (1968) found, as did Porter, that as managers advance, their need for safety decreases and social, esteem, and self-actualization needs increase. As mentioned earlier, however, they argued that that situation might be explained more by status expectations than by lower-order needs gratification. They found no evidence that needs were arranged in any type of hierarchy or that needs tended to decrease in importance as they became better satisfied.

Alderfer (1969, 1972), mentioned earlier as providing some support for Maslow's hierarchical theory, for the most part gave evidence against it. When testing for negative relationships between the satisfaction and the importance of the same need, he found some tendency for the satisfaction of the lowest level needs to be negatively associated with their importance, yet the satisfaction of upper-level needs did not decrease their importance.

Huizinga (1970) tested for a hierarchy of needs by comparing the strength of the needs. If a particular need were significantly stronger than the other needs, then a dominant need would exist. The presence of such a dominant need would provide support for the theory of a needs hierarchy. However, Huizinga (1970, p. 181) concluded that

his data contained "no indication of...a 'dominating' need category in the work situation."

Smallridge (1972) partially tested Maslow's theory. According to Maslow, lower-level needs will be satisfied to a greater extent than higher-level needs. If this is so, Smallridge reasoned, then security needs should rank low in importance. Instead, the teachers in his study ranked security needs as most important. No significant difference was noted in his respondents' rankings of the importance of social and esteem needs.

Lawler and Suttle (1972) also gathered data to test Maslow's theory of a multilevel hierarchy of needs. In their longitudinal study of 187 managers in 2 organizations they found no evidence to support Maslow's theory. They suggested that needs may be arranged in a two-level hierarchy, with the essential biological needs on the bottom level and all other needs on the top level.

The present study seeks to expand the body of research that tests the validity of Maslow's theory in a work context. In conducting the study, seven hypotheses were designed. Hypothesis I tested Maslow's assertion that lower-level needs will be satisfied more than higher-level needs. Hypotheses II_a - II_e tested Maslow's assertion that with the satisfaction of a particular need its strength, or importance,

decreases. In short, he proposed a relationship of increased satisfaction - decreased importance. Hypothesis II_f tested Maslow's later revision (1968, 1970) which proposed that a reversal occurs in the satisfaction/importance relationship for self-actualization needs. That is, increased satisfaction of the self-actualization need leads to increased strength of the need.

The hypotheses are stated as follows:

Hypothesis I: Instructors perceive a significant difference in the level of satisfaction of their needs in the following order: security > social > other-esteem > self-esteem > autonomy > self-actualization.

Hypothesis II_a: There is a significant negative relationship between the instructor's perceived satisfaction of security needs and the importance of security needs to him.

Hypothesis II_b: There is a significant negative relationship between the instructor's perceived satisfaction of social needs and the importance of social needs to him.

Hypothesis II_c: There is a significant negative relationship between the instructor's

perceived satisfaction of other-esteem needs and the importance of other-esteem needs to him.

Hypothesis II_d: There is a significant negative relationship between the instructor's perceived satisfaction of self-esteem needs and the importance of self-esteem needs to him.

Hypothesis II_e: There is a significant negative relationship between the instructor's perceived satisfaction of autonomy needs and the importance of autonomy needs to him.

Hypothesis II_f: There is a significant positive relationship between the instructor's perceived satisfaction of self-actualization needs and the importance of self-actualization needs to him.

METHODOLOGY

Population and Sample

The population and sample of this study consisted of all of the full time instructors of four schools in the North Carolina Community College System.

Data Collection

The research instrument (along with a cover letter and a prestamped, preaddressed return envelope) was mailed to all full-time instructors in two community colleges. Eight days after the initial mailing, follow-up letters were mailed to all non-respondents requesting that the research instrument be filled out and returned. For the other two colleges, the research instruments were distributed and collected by the college administration. No follow-up was necessary in those institutions. Of 315 instruments distributed, 188 usable responses were returned for a total response of 59 percent.

Instrumentation

Existing instruments designed to measure needs satisfaction in a work situation were considered to be inappropriate. Shortcomings were detected regarding their construction. In addition, those instruments had failed to find evidence for the existence of a hierarchy of needs, giving rise to the possibility that the instruments, rather than the theory, were invalid. Thus, it was necessary to construct a new instrument. Furthermore, it seemed advisable to employ a format that had not previously been used so as to provide additional opportunities for Maslow's theory to be validated.

The semantic differential technique developed by Osgood et al. (1967) conveniently offered the means to develop a new

instrument with a format different from previous instruments. The semantic differential involves exposing a statement to a number of paired polar adjectives (good--bad, beautiful--ugly, etc.). Eight paired adjectives identified and tested by Osgood et al. were selected for use in this study. Those adjectives were: fragrant--foul, clean--dirty, sweet-sour, beautiful--ugly, good--bad, and honest--dishonest.

The application of the semantic differential calls for posing to the respondent a statement regarding each need in Maslow's theory (six in the case of this study) and then presenting to him one paired polar adjective for each statement. The adjectives are placed at the extreme ends of a seven-point scale with the respondent being asked to place his response on that scale. The following illustrates the procedure for security needs:

> The extent to which your control over your work environment assures you of an orderly, stable, secure job that is free of threat and the occurrence of unexpected, unmanageable happenings.
>
> good ' ' ' ' ' ' bad
> 1 2 3 4 5 6 7

A crucial task for each needs category was to make brief, but precise and inclusive, statements that described the need in question. This called for knowledge of Maslow's needs categories. Physiological needs were eliminated from the study. To facilitate the test for the other needs categories, esteem needs were divided into the categories of other-esteem, self-esteem and autonomy needs. Thus, this study used the categories of

security, social, other-esteem, self-esteem, autonomy and self-actualization needs. The following six statements were used:

1. Security: The extent to which your control over your work environment assures you of an orderly, stable, secure job that is free from threat and the occurrence of unexpected, unmanageable happenings.

2. Social: The friendliness and helpfulness of other instructors both inside and outside of your area of speciality and the companionship and sense of belongingness that they provide you.

3. Other esteem: The amount of esteem that you receive from others where you work.

4. Self-esteem: The contribution that your job makes to your feelings of self-esteem.

5. Autonomy: The opportunities that your job gives you for independent thought and action.

6. Self-actualization: The opportunities that your job gives you to develop your full potential and to be all that you can be.

These six statements were then repeated, with different paired polar adjectives being presented with each statement. That process was continued until each statement had been paired with all six sets of polar adjectives. The instrument

generated six responses for each of the six statements, thus producing 36 items. To avoid directional bias in the responses, 25 percent of the scales, selected at random, were reversed.

The responses were easily scored. The scale ranged from 1 to 7. In instances in which the negative adjective was on the left, the numbers were scored: 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5; 6 = 6; 7 = 7. However, when the positive adjective was on the left, the numbers were scored: 1 = 7; 2 = 6; 3 = 5; 4 = 4; 5 = 3; 6 = 2; and 7 = 1. Each needs satisfaction score was calculated by summing the scores over the six items pertaining to that need. The satisfaction score for each need could range from 6 to 42. The total needs satisfaction score (obtained by summing the six needs satisfaction scores) could range from 36 to 252.

To test the validity of the instrument the responses to all thirty-six items were subjected to factor analysis.

The resulting rotated factor matrix for all needs satisfaction items is presented in Table 1. The corresponding factor analysis factors with eigenvalues, variances and percentages appear in Table 2. The following abbreviations are used in the tables: SC = Security needs; SO = Social needs; OE = Other-Esteem needs; SE = Self-Esteem needs; AU = Autonomy needs; and SA = Self-Actualization needs.

TABLE 1

Rotated factor matrix for all needs satisfaction items

Item[a]	SC	SO	OE	SE	AU-SA	h^2
1	.85					.87
7	.81					.85
13	.84					.88
19	.84					.91
25	.83					.86
31	.86					.92
2		.78				.96
8		.77				.78
14		.85				.92
20		.77				.87
26		.82				.87
32		.84				.92
3			.84			.85
9			.84			.85
15			.80			.89
21			.80			.86
27			.82			.90
33			.76			.83
4				.74		.86
10				.64		.91
16				.72		.89
22				.65		.81
28				.67		.90
34				.67		.92
5					.77	.89
11					.77	.77
17					.75	.84
23					.64	.82
29					.75	.90
35					.82	.88
6					.80	.84
12					.79	.90
18					.82	.90
24					.82	.88
30					.77	.84
36					.81	.88

[a]Item numbers correspond to those in the research instrument.

TABLE 2

Factor analysis factors with eigenvalues, variances, and percentages

Factor	Eigenvalue	Variance	Percentage
SC	2.6	5.8	18.0
SO	3.6	5.3	16.9
OE	1.7	5.5	17.6
SE	1.2	3.8	12.4
AU-SA	21.0	9.6	31.0

The eigenvalue is a measure of the amount of variability explained by each factor designated. The common practice is to consider as significant only those factors with an eigenvalue of 1 or greater. Produced by the factor analysis for this study were five factors with eigenvalues greater than 1 (Table 2). Those five factors explained 95.9 percent of the total variation in the responses. In addition, the communality scores (h^2) in Table 1 are high. All of the foregoing is indication of the existence of strong factors.

However, only five factors emerged instead of the expected six, because autonomy and self-actualization items loaded on the same factor (Table 1). Although the factors produced did not precisely conform to expectations they did closely

approximate the expected factors. Thus, the instrument was deemed suitable for measuring the satisfaction of needs identified by Maslow.

Part II of the research instrument was designed to measure needs importance. To prevent needs satisfaction responses from contaminating needs importance ratings, Beer's (1966) and Alderfer's (1972) technique of placing satisfaction measures in one part of the questionnaire and importance measures in another was followed. To avoid contamination further, a different format (Alderfer, 1972) was used for importance measures. This format consisted of six statements pertaining to the needs in Maslow's classification system. Respondents were asked to distribute 100 points among the six statements, giving the highest number of points to the statement that was most important to them and the lowest number of points to the statement that was of least importance, and so on for the items in between. They were asked to count the points after they finished distributing them to make sure that they added to 100. Such a ranking system seemed essential in preventing the respondent from automatically indicating that all of the needs were extremely important to him. In addition, Alderfer (1972) found that the use of a 100-point scale to rank needs importance yielded higher reliability scores than did a scale of 1 to 6.

RESULTS

Hypothesis I predicted that needs would be satisfied in the following manner: security > social > other-esteem self-esteem > autonomy > self-actualization. To test that hypothesis, the needs were ranked according to the magnitude of their perceived satisfaction. A visual inspection was then made to determine if the pattern of satisfaction was in the manner predicted. Analysis of variance was then used to determine if there were significant differences in the mean scores of the needs. Next, formulas were used to determine precisely which scores differed significantly from the others.

Table 3 shows the needs ranked according to the magnitude of their satisfaction and indicates the size and significance of the differences. The rankings were certainly not those predicted, and Hypothesis I is not accepted. To determine if a hierarchy existed in terms of the needs satisfaction levels actually obtained, levels of statistical significance were calculated and applied to the differences between the needs satisfaction levels. As indicated in Table 3 only one significant difference emerged.

TABLE 3

Mean satisfaction levels of needs and size of the difference between levels

Need	Mean satisfaction level	Size of the difference
Self-esteem	35.0	
		SE - AU = 0.20
Autonomy	34.8	
		SU - SO = 0.10
Social	34.7	
		SO - SA = 0.70
Self-actualization	34.0	
		SA - OE = 0.10
Other-esteem	33.9	
		OE - SC = 1.80**
Security	32.1	

** Significant at the .01 level.

Hypothesis I1 tested for the relationship between needs satisfaction and needs importance as predicted by Maslow. For each of the six needs a Pearson Product-Moment correlation cooefficient was calculated to determine the relationship (and its direction) between needs satisfaction and needs importance. To test Maslow's theory, a negative, significant relationship was predicted for security, social, other-esteem, self-esteem, and autonomy needs; a positive, significant relationship was predicted for self-actualization. However, as shown in Table

4 only security and autonomy needs correlated in the direction predicted, and neither correlation was statistically significant. Thus, Hypothesis II is not accepted.

TABLE 4

Correlation coefficients for the relationship between needs satisfaction and needs importance

Needs satisfaction	Needs importance					
	SC	SO	OE	SE	AU	SA
SC	-.11					
SO		.16*				
OE			.01			
SE				.12		
AU					-.02	
SA						-.01

*Significant at .05 level.

DISCUSSION

Six needs categories derived from Maslow's theory provided the means for conceptualizing the needs of instructors in the four community colleges studied. The theory was appropriate for that purpose. The needs categories have obvious intuitive merit. In addition, they responded well

to factor analysis, indicating that separate, distinct needs categories, similar to the ones identified by Maslow do exist. Thus, the needs categories identified by Maslow had usefulness as a heuristic device for conceptualizing situations and giving order to a mass of information.

However, no evidence of a needs hierarchy was found. Lower-level needs, as identified by Maslow, were not satisfied to a greater extent than higher-level needs, nor was increased needs satisfaction related to decreased needs importance. The question arises, though, as to whether the research instrument did, in reality, measure needs satisfaction. In his factor analysis of Porter's instrument, Payne (1970) failed to obtain factors corresponding to the needs identified by Maslow. He concluded that the instrument did not measure the needs identified by Maslow but, instead, measured general job satisfaction. This researcher considered that danger. However, the factor analysis of the responses dispelled that possibility, for five distinct factors corresponding to Maslow's categories were produced. If general job satisfaction were being measured, one would not expect to obtain such clean, distinct factors.

Another question regarding the validity of the findings stem from the cross-sectional nature of the study. Perhaps the findings would be more supportive of the hierarchical concept

if a longitudinal format (as recommended by Hall and Nougaim (1968) and Lawler and Suttle (1972) were used. Such a study would measure needs satisfaction and needs importance at a point in time and, after a specified interval of time, measure them again. Such a procedure is justified by Maslow's assertion that needs may have to be chronically satisfied before people move on to the next higher needs. Still, in their longitudinal studies neigher Hall and Nougaim nor Lawler and Suttle found evidence that increased needs satisfaction was related to decreased needs importance.

CONCLUSIONS

The failure to find evidence of a hierarchy of needs in the work situation suggests that, as Goodman (1968) speculated, a job that offers reasonable opportunities to satisfy the basic needs will break down the hierarchical relationship posed by Maslow. Thus, supervisors who use the hierarchy of needs theory to guide their relations with their subordinates should re-examine their approach. They should consider other theories that explain the inter-relationship of needs and that explain and predict subordinate behavior. For example, one possibility is to embrace the theory of a two-level hierarchy of needs. That theory places the essential biological needs

on the bottom of the hierarchy and all of the other needs (security, social, other-esteem, self-esteem, autonomy, and self-actualization needs) on the next level. Such a theory holds that all of the upper level needs are of equal importance, with the dominant need varying from moment to moment and from day to day.

Another theory useful to those who can no longer accept the hierarchical concept is the "two-factor" theory advanced by Frederick Herzberg (1957). Herzberg drew heavily on Maslow's needs categories in identifying two sets of needs. He labeled one set of needs as "hygiene" factors (dissatisfiers) and another set of needs as "motivator" factors (satisfiers). Without making use of a hierarchical concept, Herzberg advanced a logical way in which his theory could be used as a guide for supervisors concerned with motivating their employees and understanding and predicting their behavior.

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